

ABSTRACT

The present invention provides a polarization mode dispersion compensator comprising: a compensating portion which includes a first polarization controller which performs polarization conversion on light propagating along an optical transmission line and a DGD (Differential Group Delay) emulator which adds a DGD to the light which is polarization-converted by said first polarization controller, said compensating portion being for compensating polarization mode dispersion which occurs in the light while the light propagates along the optical transmission line; a second polarization controller for performing polarization conversion on the light, of which the polarization mode dispersion is compensated, so that a state of polarization of the light can be one linear polarization; a polarization beam splitting portion for splitting the light, which is polarization-converted by said second polarization controller, into the one linear polarization and an other linear polarization which is orthogonal to the one linear polarization; an optical-intensity measuring portion for measuring intensity of the other linear polarization; and a controlling portion for controlling said compensating portion and said second polarization controller so that the intensity of the other linear polarization measured by said optical-intensity measuring portion becomes minimized.